

HAYNES[®] X-750 alloy

Physical Properties

Physical Property	British Units		Metric Units	
Density	RT	0.298 lb/in. ³	RT	8.26 g/cm ³
Melting Range	2540-2600°F	-	1395-1425°C	-
Thermal Conductivity	400°F	82 Btu.in/h.ft ² .°F	200°C	14.1 W/m.°C
	600°F	93 Btu.in/h.ft ² .°F	400°C	16.9 W/m.°C
	800°F	107 Btu.in/h.ft ² .°F	600°C	19.8 W/m.°C
	1000°F	120 Btu.in/h.ft ² .°F	700°C	21.3 W/m.°C
	1200°F	132 Btu.in/h.ft ² .°F	800°C	22.7 W/m.°C
	1400°F	147 Btu.in/h.ft ² .°F	900°C	24.0 W/m.°C
Mean Coefficient of Thermal Expansion	RT	-	RT	-
	70-800°F	7.8 µin/in.°F	20-500°C	14.3 µm/m.°C
	70-1000°F	8.0 µin/in.°F	20-600°C	14.8 µm/m.°C
	70-1200°F	8.4 µin/in.°F	20-700°C	15.5 µm/m.°C
	70-1400°F	8.9 µin/in.°F	20-800°C	16.3 µm/m.°C
	70-1600°F	9.4 µin/in.°F	20-900°C	17.4 µm/m.°C
	70-1800°F	9.8 µin/in.°F	20-1000°C	17.9 µm/m.°C
Electrical Resistivity	700°F	47.7 µohm.in	20°C	121 µohm.m
	400°F	48.8 µohm.in	200°C	124 µohm.m
	800°F	50.5 µohm.in	400°C	126 µohm.m
	1000°F	51.2 µohm.in	600°C	130 µohm.m
	1200°F	51.3 µohm.in	700°C	129 µohm.m
	1400°F	50.7 µohm.in	800°C	128 µohm.m
	1600°F	49.8 µohm.in	900°C	126 µohm.m
Dynamic Modulus of Elasticity	70°F	31.0 x 10 ⁶ psi	20°C	214 GPa
	400°F	29.2 x 10 ⁶ psi	200°C	201 GPa
	800°F	27.4 x 10 ⁶ psi	400°C	189 GPa
	1000°F	26.7 x 10 ⁶ psi	600°C	184 GPa
	1200°F	25.5 x 10 ⁶ psi	700°C	176 GPa
	1400°F	24.0 x 10 ⁶ psi	800°C	165 GPa
	1600°F	22.1 x 10 ⁶ psi	900°C	152 GPa
	1800°F	20.0 x 10 ⁶ psi	1000°C	138 GPa

RT = Room Temperature